Problem A. BibTeX

Input file:	`bibtex.in`
Output file:	`bibtex.out`
Time limit:	1 second
Memory limit:	256 megabytes

BibTeX is a tool for formatting lists of references. The BibTeX tool is typically used together with the LaTeX document preparation system. BibTeX uses a style-independent text-based file format for lists of bibliography items, such as articles, books, theses.

In this problem you will have to emulate the part of BibTeX to create bibliography based on book and article references description.

Reference description starts with "`@reference type`" followed by '{' followed by a list of fields formatted as "`name = "value"`", separated by commas, followed by '}'.

Your program must support the following reference types:

- **article** — An article from a journal or magazine.

  Required fields: author, title, journal, year

  Optional fields: volume, number, pages
- **book** — A book with an explicit publisher.

  Required fields: author, title, publisher, year

  Optional fields: volume

The fields are formatted as follows:

Field	Description
author	Each author is formatted as "`Name1 Name2 ... Surname`". There are at least 1 and at most 10 names. If there are several authors, they are separated by "`and`". No author has name or surname equal to "`and`". The total length of the field doesn't exceed 200 characters. Names and surnames contain only letters of the English alphabet and are separated by a space.
title	Title of the source. A string of up to 200 characters containing letters of the English alphabet, spaces, digits and punctuation.
journal, publisher	Journal name or publisher name. A string of up to 200 characters containing letters of the English alphabet, spaces, digits and punctuation.
year	Integer number from 1500 to 2008.
volume	Integer number from 1 to 10^6.
number	Integer number from 1 to 10^6.
pages	Formatted as "`from--to`" or as "`page`". "From", "to" and "page" are integers from 1 to 10^6, "from" $<$ "to".

Authors of each source are sorted by surname, then by first name, second name, etc. After that all references are sorted by first author surname, then first author first name, then first author second name, etc, then by second author surname, etc, (if corresponding name doesn't exist, empty string is used instead) then by title. No two references have the same set of authors and the same title (except books that can have several volumes, such references are sorted by the volume).

Each article reference is formatted as:

"`Authors Title // Journal[, Volume][ (Number)] -- year[ -- pages]`".

Here "`[...]`" means optional part. Authors are separated by comma. Each author is formatted as "`Surname I1. I2. ...`" where I1, I2, etc are author's initials (the first letter of the author's corresponding name). Pages are formatted either as "`p. page`" if there is only one page, or "`pp. from--to`" if there are many.

Each book reference is formatted as:

"`Authors Title[, Vol. Volume] -- Publisher, Year`".

All references are numbered starting from 1 and preceded by their number in square brackets.

See example for further reference.

Input

Input file contains BibTeX reference list containing up to 100 references. All entries in the input file are case sensitive. All elements of input file are separated by at least one space and/or line feed.

Output

Output the bibliography in the required format.

Example

bibtex.in

```
@book
{
    author = "Donald Ervin Knuth",
    title = "The Art of Computer Programming",
    volume = "1",
    publisher = "Addison-Wesley Professional",
    year = "1997"
}

@book
{
    author = "Donald Ervin Knuth",
    title = "The Art of Computer Programming",
    volume = "2",
    publisher = "Addison-Wesley Professional",
    year = "1997"
}

@article
{
    author = "Robert Endre Tarjan and Andrew Goldberg",
    title = "A new approach to the maximum flow problem",
    journal = "Journal ACM",
    volume = "35",
    year = "1988",
    pages = "921--940"
}
```

bibtex.out

```
[1] Goldberg A., Tarjan R. E. A new approach to the maximum flow problem // Journal ACM, 35 -- 1988 -- pp. 921--940
[2] Knuth D. E. The Art of Computer Programming, Vol. 1 -- Addison-Wesley Professional, 1997
[3] Knuth D. E. The Art of Computer Programming, Vol. 2 -- Addison-Wesley Professional, 1997
```